Jacob's Ladder Trail Scenic Byway Study

Becket • Chester • Huntington • Lee • Russell

Executive Summary

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PIONEER VALLEY PLANNING COMMISSION

JACOB'S LADDER TRAIL SCENIC BYWAY STUDY:

- **EXECUTIVE SUMMARY**
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JACOB'S LADDER TRAIL SCENIC BYWAY PROJECT

Background

The Intermodal Surface Transportation Efficiency Act of 1991, known as ISTEA, provides authorization of transportation funds to all aspects of the transportation arena including infrastructure, transit, congestion, safety and the environment. ISTEA also provides funds for special program activities that enhance typical framework of the transportation network. One of these special programs is the Scenic Byways Program.

The Scenic Byways Program is designated for the planning, design, and implementation of improvements to scenic highways. Projects included in this program focus on the betterment of the services and facilities that attract and please the traveling public. Several objectives of Scenic Byways Projects include: corridor maintenance, safety improvements, intermodal use, recreation enhancement, historical preservation, and development of tourist amenities servicing the scenic corridor.

The Pioneer Valley Planning Commission (PVPC) received funding under the FY92 Interim Scenic Byways Program for the purpose of recognizing, preserving and interpreting the scenic beauty and historic properties along the Route 20 corridor from Russell to Lee, Massachusetts, commonly referred to as Jacob's Ladder Trail. This Jacob's Ladder Trail area, and in particular the stretch of Route 20 which runs from Russell to Lee, has been recognized even in these modern times as an area unspoiled by commercial franchises, flashy signs and grid development. Instead, the corridor is dotted with quaint little villages and shops, neatly kept historic houses and impressive natural beauty of rock and river.

The Jacob's Ladder Trail (JLT) Scenic Byway Project serves as one of two interim projects for the State of Massachusetts. The interim projects will be evaluated in order to establish the appropriate criteria, structure and designation process of projects within the state's scenic byway program. The Jacob's Ladder Trail was selected as a pilot project due to the unique and historic setting surrounding the corridor as it traverses through the hilltowns of Western Massachusetts. Tradition and scenic beauty abound as the corridor provides access to a plethora of cultural and recreational activities. These characteristics coupled with the dependency upon State Route 20 as the principle transportation facility provide ideal surroundings for the Scenic Byway Project application.

In addition, this project was to prepare the Jacob's Ladder Trail communities for an increase in participation by visitors in the various local cultural and recreational activities by providing adequate public facilities and access to natural and man-made places of interest. A final purpose was to put into effect local controls to provide the maximum protection for the natural and historic resources of the corridor through land use planning tools. The underlying principle of these objectives is to allow economic growth to occur without negatively impacting the scenic and historic character of the Jacob's Ladder Trail Byway.

Overview Of Phase I

The FY92 Phase I Jacob's Ladder Trail Scenic Byway Program was initiated by the Pioneer Valley Planning Commission, with technical assistance from the Berkshire County Regional Planning Commission, in February 1993 and consisted of four major components, historic

preservation, transportation, land use and economic development/tourism. The historic preservation activities focused on completing historic resource inventories for the purpose of submission of sites and districts to the National Register of Historic Places. In addition, a landscape assessment was conducted along the corridor so as to assess the scenic and aesthetic qualities of the highway. The transportation assessment included an analysis of highway and safety conditions along Route 20 for both bicycle and motorist use. The land use assessment included a detailed review of the five communities zoning bylaws with suggested revisions to address potential development concerns along the highway. A tour book was published which promoted bicyclist and motorist use of the Jacob's Ladder Trail and its immediate area. In addition, much of the data which was collected was put into a series of GIS overlays and mylar base maps to be used in the ongoing assessment and management of the Byway.

A "Jacob's Ladder Trail Advisory Committee" was also created in Phase I and served to help oversee the project and its direction. This committee consisted of representatives from all five communities, the local business association, an area bicycle shop owner and cyclist, Massachusetts Highway Department officials, Berkshire County Regional Planning Commission and the Pioneer Valley Regional Planning Commission.

This Executive Summary provides an overview of the four final reports of the Jacob's Ladder Trail Scenic Byway Phase I Project. A brief summary of each report is included as well as the respective general recommendations. The Executive Summary also includes separate discussions on a proposed signage system for the scenic byway and the map products generated for the project.

Future Phases

The Jacob's Ladder Trail Phase II program begins in March 1994. The intent of Phase II is to continue to meet the goals of the Interim Scenic Byways Program for Jacob's Ladder Trail by expanding upon the program established in Phase I through:

- attainment of local commitment
- accommodation of increased tourism and development of scenic byway amenities
- preservation/conservation of historic and cultural resources adjacent to the highway.

Phase II will build upon the planning work of Phase I, which initiated a scenic byway management program through components of historic preservation, land use, highway safety assessment, landscape assessment, map production and scenic bike tours.

Specifically, Phase II will prepare designs for highway amenities which will enhance the scenic driving experience of motorists along the Byway through a cohesive series of planned landscapes. Tourism development will be emphasized through cooperation with regional tourism and visitor's agencies. The project will continue to build community support and participation, will continue to work with the local Planning Boards to address those zoning issues addressed in Phase I and will work towards the establishment of a permanent Byway Management Organization to oversee the management and advisory functions pertaining to the scenic

highway. Conceptual designs, design plans, outline specifications and cost estimates will be prepared for highway safety features, landscape improvements and highway amenities.

Funding has been requested for Phase III of the Jacob's Ladder Trail Scenic Byway Program which would be the first step in the physical implementation of the program goals. Phases I and II focused primarily on data collection, planning and design. Phase III, if funded, would begin in 1995 and would result in the development and enhancement of roadside amenities as well as provide for safe and improved driving conditions. This would include such items as improvements to existing road-side turnouts, retaining wall repairs, development of visitor and information centers, development of tourist destinations and related eligible projects.

CULTURAL RESOURCES INVENTORY

The cultural resources inventory project consists of a comprehensive inventory for the town of Russell, Massachusetts following the Massachusetts Historical Commission's (MHC) standards and additions to existing inventories in the towns of Huntington, Chester, Becket and Lee. The project focuses on the Jacob's Ladder Trail corridor and historic transportation systems which connected the towns. This project required field work, research in local libraries and historical commission files, and interviews with local historians. With the exception of Huntington, the Pioneer Valley Planning Commission inventory team met with members of each town's Historical Commission to describe the project and to elicit suggestions and information.

The cultural resources inventory project resulted in a well documented historical data base of the Jacob's Ladder Trail, based on research and extensive information collection. This included the compilation of 147 MHC inventory forms for various sites, structures and properties within the five Jacob's Ladder Trail corridor communities, a detailed index for the inventory and the development of an endangered properties list. As a result of the inventory, four specific recommendations for future preservation planning of those significant resources of the corridor and a set of general recommendations were developed. The following is a summary of the specific recommendations.

Nominations of Individual Resources and Historic Districts to The National Register of Historic Places

The cultural resources inventory identified a number of individual buildings and districts to be nominated to the National Register of Historic Places. This included the following:

Russell:	Russell Center; Woronoco; Crescent Mills; Woronoco Heights; 110 General Knox Road; 771 Huntington Road - Mortimore Farm; Cobble Mountain Reservoir.
Huntington:	Huntington Center.
Chester:	North Chester.
Becket:	Jacob's Ladder Summit including the Summit House, stone cairn, deer statue, Jacob's Well and Spring, and original Jacob's Ladder Trail road bed.
Lee:	East Lee.

Long Term Preservation Planning

National Register Historic District status does not currently qualify a resource for financial aid to help preserve it, nor does it provide any protection for the resource against inappropriate alterations or demolition. It is the recommendation of the cultural resources report that for long-term preservation of resources that local historic districts be created together with the National Register Historic Districts both on and off Jacob's Ladder Trail. Long term preservation planning also involves finding alternative forms of funding assistance for important resources. The following is a list of resources for which alternative forms of funding might best be sought.

Russell:	Strathmore Mill #1, Woronoco Road; Mortimore Farm, 771 Huntington Road; Crescent Mills Housing; Crescent Mills Burial Ground.
Huntington:	Town center commercial buildings.
Chester:	Maple Street Bridge; Chester Jail and Museum; Stanton Hall (former Grange Hall); Chester Railroad Depot; Pink Quarry Gothic Revival House.

Chester/Becket/ Middlefield:	Stone Arch Bridges.
Chester/Becket:	Chester Becket Granite Railbed.
Lee/Huntington/ Becket/Blandford:	Huckleberry Trolley Line Railbed.
Huntington/Russell:	Westfield to Huntington Trolley Railbed.
Becket:	Summit House, Stone Cairn, original Jacob's Ladder roadway and deer statue; Jacob's Well and Spring on Route 20; Houston House on Route 20.
Lee:	Barlow House; Dodgetown archaeological sites.

Preservation of Transportation-related Resources through the Intermodal Surface Transportation Efficiency Act

Transportation-related resources should be approached for preservation on Jacob's Ladder Trail as part of the heritage of the corridor. A number of transportation-related resources for which long term preservation planning is important were among the findings of the inventories. The Intermodal Surface Transportation Efficiency Act (ISTEA) aims to preserve such resources, and the following list of projects is recommended for this approach:

- Preservation of selected buildings through facade easements for rehabilitation purposes.
- Reuse of one or more of the significant but threatened buildings as a visitors' center for the Jacob's Ladder Trail Scenic Byway.
- The Maple Street Bridge in Chester should be rehabilitated and reused as a visitors' attraction such as a "Bridge of Flowers".
- Jacob's Well and Spring in Becket should be restored as an attraction within a series of landscaped turn-outs.
- The five National Register Stone Arch Railroad Bridges in Chester, Middlefield, and Becket should be preserved.
- Walking, horseback riding, snowmobile, skiing, and bicycle trails should be developed along the Huckleberry Trolley Line, the Chester-Becket Granite Railroad line and portions of the Westfield-Huntington Line.

Recognition of Resources

Three basic recognition recommendations were developed. These included using bronze National Register markers at each boundary of a National Register Historic District crossed by Route 20 once the nominations have been accepted. These districts should also be included in any brochures, guides and publications on the Scenic Byway and on any permanent displays or other interpretive materials. Finally, the Historical Commissions in the five towns should work with local schools to incorporate the history of Jacob's Ladder Trail into the curriculum using the inventory research.

HIGHWAY AND SAFETY ANALYSIS

The highway and safety analysis provides a technical evaluation of the transportation components throughout the corridor. Roadway, bridge and abutment facilities were examined to determine structural and service conditions. Traffic operations and safety measures were calculated for areas throughout the corridor for identification of hazardous travel conditions. An evaluation was also conducted for determine the feasibility of designating the corridor as a route for bicycle usage. Each evaluation conducted as part of the Jacob's Ladder Trail Scenic Byway Project was conducted in accordance with generally accepted practices and procedures for measuring facility serviceability.

The analyses of transportation components conducted for the scenic byway project serve as the basis for recommendations to improve and enhance the serviceability of the Jacob's Ladder Trail corridor. Descriptive condition status of each component is presented to identify present deficiencies and are prioritized for improvement action. The resulting action plan will then be evaluated and appropriately scheduled in later phases of the Jacob's Ladder Trail Scenic Byway Project.

The analyses conducted throughout the Route 20 Corridor that comprises the Scenic Byway Project show that there are no significant capacity problems, no traffic delays, on street parking or pedestrian concerns at the center of the towns involved. However, there are certain deficiencies under existing conditions including, the presence of the Massachusetts Turnpike (I-90) at the center of the Town of Lee along with the many curb cuts are known to cause problems of congestion and safety for local residents.

Data Collection

PVPC staff conducted a detailed field study to identify the existing physical conditions of the study area and to observe traffic operations along the Jacob's Ladder Trail Corridor. The field study included an extensive inventory of corridor's length, width, shoulders, sidewalks, curbing, guardrails, signage, major intersections, embankments, pavement markings, and retaining walls. All of this information was used in the condition and distress evaluation conducted for each of the transportation components.

In order to measure the travel demands and patterns along the Jacob's Ladder Trail Corridor, Average Daily Traffic counts (ADTs) were conducted for typical week day 24 hour periods at various mid-block locations within the study area.

Pavement inventory and distress data were collected by PVPC staff during the month of May 1993. This data was applied to the pavement management software package, "The Road Manager", which is an inventory and analysis package developed by Christman Associates.

Traffic accident data for the JLT corridor study area was obtained from the MHD Traffic Engineering Section. Accident location, frequency, severity and type were analyzed for a period of three years (1989-1991) to identify any common conditions and possible causes. The accident rate for each segment was also identified in order to determine a pattern of high hazard occurrence. This rate measures the number of annual accidents per one hundred million vehicles miles traveled. Considerations were made for low volume segments that may reflect excessively high accident rates.

Data for all bridges located along the JLT corridor from Russell to Lee was obtained from the MHD Bridge Listing dated April 1993. Bridge information collected included condition ratings, structural evaluation, American Association of State Highway and Transportation Officials (AASHTO) ratings and bridge status. Also, planned improvement activity for the study area bridges was researched with MHD.

To determine the feasibility of a bicycle route along the JLT corridor several actions were considered. A field inspection was conducted by PVPC staff consisting of an actual bicycle ride using the roadway's travel lane and shoulders. Research was conducted regarding federal requirements for bicycle routes according to facility type and service. Research also included the classification standards for bicycle service according to the type of terrain. The information gathered form these activities was evaluated to determine the appropriateness or feasibility of bicycle route designation along the JLT corridor between the towns of Russell and Lee.

Recommendations

The primary objective of a Scenic Byway Program is to redevelop and maintain a highway and its surrounding area that is of significant scenic interest. The series of reports conducted for the Jacob's Ladder Trail Interim Scenic Byway Project focus on this objective through review of the present conditions of facilities that service or provide amenities to the users of the corridor. By identifying deficiencies and enhancement supplements to the corridor, a series of recommendations can be made that focus on increasing public attractiveness and usage of the Jacob Ladder Trail Scenic Byway.

Pavement Improvements

As determined using pavement management analysis, a majority of the JLT corridor segments presently require some level of improvement. Good pavement management practices suggest addressing the needs of the system as whole rather than as individual projects with the prime objective of improving and maintaining the overall pavement condition rating. This is most effectively achieved by following an implementation schedule that reaps the greatest amount of benefit for the least amount of expenditure.

The priority of segment improvement is determined based on the calculated Benefit Value (BV). BV is a function of the vehicle volume, roadway length, estimated life of repair, improvement cost, and PCI. The product of the BV formula is a measurement of the benefit/cost ratio for each segment improvement recommendation. Table 6 in the Highway Safety and Analysis Report summarizes the improvement activity priority listing of JLT corridor roadway segments in terms of benefit value. Improvement activity to the JLT corridor infrastructure should use this priority listing as guide for the application of improvement funds.

Guardrail and Retention Wall Improvements

It is recommended that all roadway improvement projects requiring reconstruction or rehabilitation include the evaluation and appropriate replacement of guardrail structures. Where replacement is warranted, it is recommended that the new equipment be selected on the basis of aesthetics as well as safety. An example of such guardrails include steel backed timber guardrails which are ideal for scenic byways applications. The steel backed timber guardrail

takes advantage of the attractive qualities of wood and functions much like any post and beam guardrail system in obstructing vehicles from unsafe areas.

Deteriorating retaining wall structures should be replaced with structures of amenable texture and color to blend in with the surrounding landscape (rock faced, fresh-cut or natural split-face finish). This type of retaining wall system will enhance and compliment the scenic roadway.

Safety Improvements

The accident history of the study area indicates that the Becket segment and the Lee segment continuously have annual accident rates higher than the statewide average for rural minor arterials. Also, the fatality rate for the Russell segment is higher than the statewide average for that type of road and higher than the fatality rate on all roadways in the United States for 1990.[1] A large portion of the accidents involved a single vehicle incidents, approximately 31 percent. The large number of single vehicle accidents may presumably be related to physical characteristics of the roadway or unsafe operating practices rather than vehicular conflicts. Improvement measures that may circumvent the high accident occurrence include the enhancement of pavement markings, signage, and roadside lighting.

It is recommended that roadway improvements include the installation of high visibility reflectorized pavement striping and signage. These safety improvements should be routinely included into roadway improvement designs and also considered as stand alone improvements for segments with acceptable roadway conditions. The target areas should include areas of severe horizontal and vertical curves as well as high accident or fatality occurrence. For similar type area where utilities are available, roadside lighting should be considered.

Bridge Improvements

The structural evaluation of the region's bridges obtained from the MHD Bridge Listing indicates that bridge number C11029 over the Sanderson Brook in the town of Chester has been rated structurally deficient. This bridge fails to meet the minimum structural criteria and requires priority for replacement. Four other bridges along the JLT corridor approach structural deficiency and may soon require attention.

To date none of the bridges along the JLT corridor have been scheduled for improvement. Once these bridges are scheduled, it is recommended that the MHD policy for bridge widths on arterial highway be followed and at least one sidewalk to service pedestrian and bicycling activity be provided. Also, to enhance bridge aesthetics, it is recommended that any new construction or bridge improvement along the JLT corridor include bridge railings that are scenically conscience. A number of bridge railings have been developed for scenic roads including: glue-laminated wood bridge railing; Federal Lands Modified Kansas corral bridge railing; and stone masonry bridge railing.

Bicycle Route Designation

The roadway design along the JLT corridor provides for recreational use appropriate only to the most advanced bicyclists due to limited shoulder widths and extreme changes in elevation. Bicycle route designation is determined to be feasible along the portion of the JLT corridor between the Westfield - Russell line and the Chester Blandford State Forest Park in Chester.

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[1]Source: *Summary Report on Aesthetic Bridge Rails and Guardrails* (June 1992), Federal Highway Administration.

These points provide convenient and attractive areas for bicyclist and motorist parking. The remainder of the corridor is available for bicycle usage, however, is not suitable for designation.

Bicycle route identification signs in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) should be placed along the designated bicycle route. The appropriate signage will inform travelers of the roadway's multiple use. Additional bicycle crossing and bicycle route signs should be posted on major approach streets to Route 20 to inform motorist of approaching riders. In addition to signs, parallel drainage grates should be reoriented or replaced with bicycle safe grates.

Special provisions could also be made to encourage the attraction of bicyclist Groups B and C to the JLT Scenic Byway area. The designation of bicycle routes on appropriately selected roads off the JLT corridor that provide access to areas of scenic beauty or historic significance would most likely generate this attraction.

Capacity Improvements

Throughout the five segments in the study area, shoulders were found to be narrow, on average the usable shoulder width is two feet. The recommended design shoulder width standard is six feet for rural minor arterials. However, the Massachusetts Highway Design Manual allows for flexibility where appropriate, such as along corridors with surrounding physical characteristics economically incompatible with roadway expansion. The JLT corridor is one example of such flexibility.

Based on the vehicle measurements collected along the JLT corridor, no capacity deficiencies have been identified on segments in the Pioneer Valley Region. Intersection and section serviceability appear to provide adequate operating capacity and do not warrant specific action.

The Berkshire County Regional Planning Commission has identified the need for improved access to the Massachusetts Turnpike (Mass Pike) in Lee. Several improvement alternatives exist in conceptual form, yet not final commitment has been made by MHD or the Turnpike Authority. It can be assumed that improvement to any unacceptable conditions associated with turnpike access will include major investment activity and will undergo planning via the Regional Transportation Plan and Transportation Improvement Plan for Berkshire County.

LAND USE STRATEGIES

In order to develop a series of effective land use strategies for the Jacob's Ladder Trail corridor, a significant amount of research and assessment was required. A detailed survey of innovative land use strategies for scenic byways throughout the country was conducted. This was followed by a detailed assessment and critique of the existing zoning bylaws of the towns of Becket, Chester, Huntington, Lee and Russell. With the survey and assessment in hand, specific recommendations were developed for the Jacob's Ladder Trail Corridor. These recommendations were supplemented with model bylaws to address those areas of concern raised in the zoning critique or identified in the comprehensive land use strategy survey.

Survey of Innovative Land Use Strategies for Scenic Byways

Articles, guidebooks and ordinances from around the United States covering the subject of highway corridor land use management were collected and reviewed. The purpose of the review was to identify specific elements of each document that might be applied to the development of state-of-the-art bylaws for the corridor. Many of the identified elements were then used in the design review and scenic highway overlay district bylaws provided in the appendix of that report. The following list of land use articles, guidebooks and ordinances were reviewed, with brief summaries of each provided in the Land Use Strategies Report.

- The Loess Hills Scenic Byway, Western Iowa
- Visible Landscape Case Study, Chattanooga, TN
- Concept Plan for the Southwestern Pennsylvania Industrial Heritage Route
- Tools and Techniques for Managing Commercial Development
- Transportation and the Commercial Strip
- The Vermont Backroad
- Assessing the Impact of Development of Scenic Resources of the Hudson River
- Cincinnati Hillsides Development Guidelines
- Designating Scenic Roads
- Highway 278 Corridor Special Overlay District Standards
- Austin, Texas, Hill Country Roadway Corridor Regulations
- Santa Fe, New Mexico, Highway Corridor Protection District Regulations
- San Rafael Hillside Residential Design Guidelines Manual.
- Town of Wellesley Design Guidelines Handbook
- Brookline 2: Guide to Environmental Design Review for New Construction
- Appearance Code, Libertyville, IL
- Old King's Highway Regional Historic District Commission
- Amherst Design Review Handbook
- Hilton Head Island Corridor Review Committee
- Site Plan Review Ordinance
- Strips & Centers: Growth and the Region's Radial Highway Corridors
- Transportation and the Commercial Strip
- Holden Massachusetts Corridor Study
- Village District Corridor Standards
- Wisconsin Administrative Code: Dept. of Transportation Rustic Roads Board
- Tri-County Regional Planning Commission Driveway Standards for Corridors
- Sign Ordinance, Lubbock, TX
- Sign Ordinance, Libertyville, IL
- Hilton Head Island Corridor Review Committee
- Ridgeline and Hillside Conservation Areas, Pomfret, VT
- Charleston County, South Carolina Scenic Highway Districts

Assessment of Existing Zoning Bylaws

The PVPC used three general questions as a guide for reviewing the zoning bylaws and other land use controls of the Jacob's Ladder Trail communities of Becket, Chester, Huntington, Lee and Russell. These questions were as follows:

- Do the land use controls include the most up to date techniques to preserve the Jacob's Ladder Trail Corridor's scenic and historic character, maintain its environmental quality and to facilitate rural business development?
- Does the zoning bylaw text comply with the Massachusetts General Law Chapter 40A, the Zoning Act?
- How clearly are regulations, procedures and standards presented in the zoning bylaws?

As part of the critique and assessment, the PVPC researched and recommended a series of zoning strategies which can be used effectively to manage growth and development in the Jacob's Ladder Trail Corridor as well as protect and enhance the corridor's scenic and historic character. A checklist of land use techniques was developed for each of the five JLT communities. This checklist includes eleven categories of land use techniques, with each category consisting of specific bylaws. The eleven categories are commercial performance standards; environmental performance standards; environmental regulations; lot area, dimensional and setback requirements; accessory uses and structures; multi-lot residential developments; alternative development formats; scenic and historic preservation; economic development provisions; farmland and forest preservation; and enforcement.

Recommendations

The land use and growth management recommendations are divided into short-term and long-term actions. At a minimum, each Jacob's Ladder Trail community should adopt the three short-term recommendations to protect the scenic and environmental qualities and the rural character of the Jacob's Ladder Trail. The eight long-term recommendations are considered optional actions and are suggested for those communities seeking additional protection for specific resource areas or better growth management.

Short-Term Recommendation #1: Adopt Model Jacob's Ladder Corridor Overlay Zoning Bylaw
The five towns along the Jacob's Ladder Trail should adopt the Model Jacob's Ladder Corridor Overlay Zoning Bylaw, which is included in Appendix A of the Land Use Strategies Report. The overlay district would include lands within 500 feet on either side of Route 20. In Chester, Huntington and Russell, the Westfield River would constitute the northerly boundary of the overlay district. The regulations contained in the Overlay Zoning Bylaw will supplement the regulations of the underlying zoning districts and are designed to encourage harmony and compatibility of developments over the length of the corridor.

Short-Term Recommendation #2: Adopt a Municipal Bylaw for Design Review
Each Jacob's Ladder town should adopt the model Design Review Bylaw, which is contained in Appendix B of the Land Use Strategies Report. The overall goal of this bylaw is to promote well-designed development which is consistent with and enhances the historic character and scenic beauty of the Jacob's Ladder Trail.This bylaw would be in effect for the same area as the Jacob's Ladder Corridor Overlay Zoning bylaw.

Short-Term Recommendation #3: Adopt Subdivision Regulations Consistent with Jacob's Ladder Corridor Zoning Bylaw

Each Jacob's Ladder town should adopt Subdivision regulations which facilitate implementation of the Corridor performance standards. These standards should include stormwater runoff and erosion control standards for road construction, require roadside and driveway access landscaping which reflects the rural character of the area, and allow variable road and driveway widths which allow new developments to maximize retention of native vegetation while insuring safe access for emergency vehicles.

Long-Term Recommendation #1: Adopt a Creative Development Zoning Bylaw

A Creative Development zoning bylaw will help preserve rural character and visual appearance. This option will offer an alternative to standard "Approval-Not-Required" ("ANR") roadside lot development. The creative development zoning bylaw offers common driveways and flexible lot areas as options which can be used to create permanent open space, to protect farmland and forestland, natural, historic and archaeological resources, wildlife habitat, and scenic views.

Long-Term Recommendation #2: Adopt a Zoning Bylaw for Major Developments in Farmland and Woodland Resource Protection Areas

A Major Residential Development zoning bylaw establishes more stringent standards for large-scale residential developments that have the potential for significant impact to the Town's rural character and important natural resources, such as prime farmlands and woodlands. The bylaw uses a Special Permit process to ensure that large-scale developments meet performance standards established to protect prime farmlands and woodlands. The bylaw would apply to residential developments larger than ten acres or ten lots, which require approval under the Mass. Subdivision Control Law, and which are proposed within established Farmlands or Woodlands Resource Areas.

Long-Term Recommendation #3: Adopt a Scenic Upland Bylaw

A Scenic Upland bylaw will protect the scenic and environmental quality of ridgelines and hillsides which are highly visible from the Jacob's Ladder Trail. The bylaw discourages new residential development on hillsides, ridgelines and steep slopes, and any cutting of vegetation and mature trees which significantly detracts from the natural scenic quality of these resource areas. The guidelines will also require public utilities to submit plans which demonstrate that proposed construction minimizes the impact on the scenic qualities of hillside and ridgeline resource areas.

Long-Term Recommendation #4: Adopt a Common Driveway Bylaw

A Common Driveway zoning bylaw will help preserve rural character and visual appearance. The bylaw allows land owners to apply to the Planning Board for a special permit to construct a single driveway to serve two adjacent lots along an existing road. In a conventional single family development, two to six residences could be constructed along a single common driveway. Common driveways will reduce the number of curb cuts and traffic entry points along roadways. The common driveways option will increase traffic safety, encourage developers to retain more of the native vegetation, and preserve rural character by minimizing the degree to which the landscape appears to be cut up into separate single family lots.

Long-Term Recommendation #5: Adopt a Scenic Road and Shade Tree Bylaw

A Scenic Roads bylaw will help preserve rural character and visual appearance by requiring that significant alterations to certain public ways and public shade trees be reviewed and approved by the town Planning Board. This bylaw will allow residents, town officials and the Jacob's Ladder Corridor Advisory Committee to nominate roads for designation as scenic roads. The town Planning Board will review nominations and refer them to Town Meeting for approval. Scenic roads and public shade trees would be designated by a majority vote at a Town Meeting. Approval would be required for any proposed work within the boundaries of the public right of

way of Town Meeting designated scenic roads. Work requiring approval includes tree cutting or removal, removal or destruction of stone walls, road work, and utility work.

Long-Term Recommendation #6: Adopt a Sign Bylaw
A sign bylaw can prevent uncontrolled signage lining the Jacob's Ladder Trail, which can rapidly degrade a town's character, and in worst cases, cause traffic safety hazards. The sign bylaw establishes standards for the size, height, placement, and illumination of all types of signs. Certain types of signs, such as billboards or flashing signs, are prohibited.

Long-Term Recommendation #7: Adopt Parking Standards
A Parking Bylaw establishes uniform standards for off-street parking and loading. It establishes the number of parking spaces required for each type of land use. It can prevent unsightly parking lots from degrading a community's character, by establishing minimum standards for landscaping, screening and lighting, and by encouraging shared parking or parking to the side or rear of businesses.

Long-Term Recommendation #8: Farmland, Forestland, and Open Space Preservation
The Jacob's Ladder Corridor Advisory Committee should work in conjunction with the town Conservation Commissions, Boards of Selectmen, and Planning Boards to identify significant farmland and forestland areas and to preserve these resources by seeking state and federal grant funds to purchase conservation easements and development rights on priority parcels.

LANDSCAPE INVENTORY AND ASSESSMENT

A scenic landscape inventory was conducted on the Jacob's Ladder Trail Section of Route 20 between Russell and Lee, traveling in both directions, during the summer, fall and winter months to quantify the scenic views and to establish relative values of scenic areas along the Trail. Numerical evaluations were made at half-mile intervals documenting the views and features and eyesores at each of these points both verbally and photographically. In addition, a narrative was prepared for the entire Trail which describes the experience of traveling the road, making the description of Jacob's Ladder Trail fully dimensional. With this field work as a foundation, the most scenic areas along the Trail were identified and mapped.

The purpose of the inventory was to identify the qualities and features which make Jacob's Ladder Trail a scenic byway and to distinguish among the various sections of the road variations in degree of scenic importance. These distinctions can then be used for helping to make decisions about the sections of the roadside which are more or less deserving of conservation, and where improvements might best be directed.

Highly rated scenic sections of varying lengths were found in each of the five communities with Russell and Huntington having the greatest proportion, Chester being third, Lee and Becket having the shortest lengths. Included in the Landscape Inventory and Assessment Report is a map locating these road segments and identifying their relative values. It is the recommendation of the report that decisions concerning development and conservation should take into consideration the different levels of scenic importance described by this inventory. Careful attention must be paid to conserving the scenic qualities of the two most highly ranked categories, but more flexibility may be given to the sections of the road with the more modest rankings.

Recommendations for Scenic Improvements

The Scenic Landscape Inventory allowed for a summary of the scenic qualities of Jacob's Ladder Trail. In addition it allowed for a comparison of scenic qualities within the Trail as well as with other appreciated rural roads in the region. What we learned was that the Jacob's Ladder Trail Corridor is scenic for its varying topography, for the river views it offers, for the variety of vegetation areas from ledge to wetland and woodland, and for the modest but well-maintained 18th, 19th and early 20th century buildings and structures along it. Further, it is in large part uninterrupted by commercial signs, standardized buildings, clear-cut lots, overscaled structures, or any of the many other ways in which rural corridors are spoiled scenically. In essence this is an excellent example of the typical New England rural corridor unspoiled by over-development. It is this modest quality which, paired with its natural resources, is the underlying theme of the Jacob's Ladder Trail Scenic Byway. It follows then that future efforts to develop and enhance the landscape should be measured against these qualities of modesty and typicality. In the spirit of this recommended standard or benchmark, a number of scenic enhancements are proposed:

- There are an adequate number of turn-outs along the corridor. It is preferable to improve the existing amenities to constructing new ones. These turn-outs are part of the history of the road since they are original curves in the roadway which were kept when the road was straightened. Therefore, keeping them is both aesthetically and historically preferable.

- Turn-outs along Route 20 should be landscaped with native plants, the rural gravel road surfaces of the turn-outs should be maintained but improved, and more formal borders should be established between the areas designed for bicyclists and pedestrians and those designated for cars.

- Materials for byway signage should be constructed and mounted on materials appropriate to the rural theme of the Byway; ie, wood, in some cases painted bronze or low luster metals. Signs should be placed against a backdrop so that they are not profiled against the horizon and the reverse sides should be wood and not reflective metal.

- Vegetation along the highway should be pruned to open views of the Westfield River.

- Where possible, easements should be obtained on open spaces located in scenically important areas.

- Easement should be obtained on entrances to culturally significant areas, such as Jacob's Pillow in Becket, so that the rural experience is emphasized.

- Residential and commercial development should maintain the scale, materials and simplicity of design which characterize the best segments along the corridor. Buffering new development with vegetation is recommended to retain and, where possible, improve the scenic values of the roadway.

- Existing retaining walls of concrete and metal should be replaced with more aesthetically appropriate retaining walls without compromising their safety purpose. The Federal Highway Administration together with the National Park Service has developed a number of options which should be considered for new retaining walls.

- Existing guard rails should be replaced with new guard rails of more aesthetically appropriate design and materials, i.e. the wooden/metal rails once again developed by the Federal Highway Administration and the National Park Service. The objective is to meet the rigors of highway travel and maintenance, including snowplowing in the winter, yet blend into the landscape.

- Jersey barriers should be removed as soon as possible.

- Above ground utility lines along the Byway should be buried where feasible.

- Future development should be directed away from the ridgelines of abutting hills, to prevent the blocking of significant views into the distance. These so-called "viewsheds" are outside the boundaries of the corridor, but are essential to its continuing scenic value.

- Specific zoning and historic district recommendation appear in the Cultural Resources Inventory Report and the Land Use Strategies report respectively.

SIGN SYSTEM DESIGN

One of the objectives of the Jacob's Ladder Trail Scenic Byway Study was to design a system of signage for the Trail. This task as originally described envisioned interpretive signs, and service signage, together with historical markers. The first step in designing a system was initiated by referring to the *Manual on Uniform Traffic Control Devices for Streets and Highways* by the U.S. Department of Transportation (USDOT), Federal Highway Administration (FHWA). This publication serves as the foundation for the system and has been supplemented by the FHWA series of *Final Case Studies for the National Scenic Byways Study*, recommendations by Scenic America, and through field work by the Pioneer Valley Planning Commission (PVPC) Transportation Section and the PVPC library collection.

In order for the system design recommendations to be useable to the corridor communities, this report will summarize each of the basic sign types and then address its practicality and appropriateness for the Jacob's Ladder Trail.

There are six categories of signs which need to be considered in a planned signage system for the Byway: regulatory signs, warning signs, guide signs for conventional roads, motorist service signing, recreational and cultural interest area signs, and tourist oriented directional signs. Finally, trailblazer signs are an optional category of signs which may be used as a means of identifying the Trail.

Regulatory and Warning Signs

Most of the categories of signs needs to be addressed individually as there are varying degrees of latitude for number, placement, materials, etc. among them, however, regulatory and warning signs which provide the laws and identify potentially hazardous conditions are similar in that they are fixed in format and their placement is dictated by safety considerations. As required signs within any system, regulatory and warning signs are now in place on Jacob's Ladder Trail, they are functional, standard and apparently adequate. The new sign system accommodates these signs and does not recommend changes or additions except for their mountings. Regulatory and warning signs should be incorporated in the new system by replacing their current mountings with those adopted for the rest of the sign system.

Guide Signs

Guide signs for conventional roads are green with white lettering with the exception of Scenic Area Signs which fall in this category but are blue with white lettering. In the interest of keeping the roadside as sign-free as possible, it is not recommended to post additional guide signs. Scenic areas and turn-outs along the Trail are in most cases visible from a distance and the thematic simplicity of the Byway would preclude adding signs for them. The few guide signs which are in place and direct travelers to neighboring towns and intersecting roads, however, should be incorporated in the overall sign mounting system, and should be reinstalled on the wooden structures which are recommended for the system.

Specific Service Signs and Tourist Oriented Directional Signs

Two categories of signage should be included in the system but coordinated in order to limit roadside clutter. One of these is specific service signing and the other is tourist oriented directional signing (TOD). Both sign types are white lettering on blue backgrounds. Specific service signs indicate categories of services such as CAMPING, LODGING, FOOD and GAS and tourist oriented directional signs indicate specific business names such as LILY'S BED AND BREAKFAST, OTIS GENERAL STORE. As a means of promoting economic development in conjunction with the Scenic Byway, these two categories of signs are recommended for installation along the Trail. However, of the two categories, TOD signs are preferable. They not only direct tourists, but collectively they create an interest in an area with the promise of things to do in different directions. The disadvantage of TOD signs is that they are paid for by the businesses themselves while the specific service signs are part of the state's sign program. Four businesses may appear on a single TOD composition and can include logos. Specific service signs should only be placed when businesses are not able to install their own TOD signs. They should be the fewest in number consistent with the need for directing travelers off Route 20 for services, yet maintaining the appearance of the roadside. To that end, they should be the minimum size and should be mounted on the wooden system recommended for the Trail.

Recreational and Cultural Interest Area Signs

Recreational and cultural interest area signs are brown background with white lettering and are most effective as symbols rather than lettering. Together with the TOD signs, the recreational and cultural interest signs generate a collective interest in a region. Tourists may not follow up the majority of the opportunities, but their existence is registered and the region takes on the character of a tourist destination. Advantageous to economic development, recreational and Cultural Interest Area signs must be balanced against the scenic, unspoiled qualities of the route and be sparingly used. Mounting signs on identical wood posts placed at uniform heights and in a consistent zone minimizes their intrusion while offering the information where travelers learn to look.

Trailblazer Signs

Trailblazer signs have been used in a number of states for scenic byways. The most effective are logos which identify a theme or characteristic of the byway. They do, however, add another layer of signage to the roadside. An effective solution to this problem is a sign system for all the types of signs which incorporates a logo in its construction. One of the best examples is found in the accompanying illustrations, where a combination regulatory and guide sign has a small logo extension. This sign mounting system of is also exemplary and one which would blend with the rural character of Jacob's Ladder Trail. Regulatory, warning, and guide signs are all mounted on these wooden supports as shown in the accompanying photographs.

Historic District Signs

The identification of historic districts adds quality to the experience of travel and helps the public appreciate its historic resources. Jacob's Ladder Trail passes through one National Register Historic District at the present. It is anticipated that additional districts will soon be in place throughout the Byway. Discrete signs identifying the existence of an historic district and its name

would be appropriate additions to the roadway. A single sign would be adequate for a very small district such as the potential Jacob's Ladder Trail district at the corner of Route 20 and Fred Snow Road. Two signs, one at each district boundary as it crosses Route 20 would be better for larger districts such as Chester Factory Village Historic District or the potential Russell Center Historic District. Traditionally, these signs are bronze or aluminum with a dark ground and raised metal letters. Some communities have used a logo as part of the design and this would help integrate the Byway together thematically. Rather finer in appearance than standard highway signs, these would not necessarily have to be mounted on the same wooden supports as the other signs in the system. Dark, non-reflective metal supports are commonly and effectively used.

Bicycle Route Signs

Jacob's Ladder Trail is a relatively well-used route for advanced bicyclists. It is anticipated that this use will increase to include basic bicyclists when a book of tours is published as part of this project in the spring of 1994. In consultation with cyclist members of the Advisory Committee for Jacob's Ladder Trail, it was found that cyclists prefer not to have a designated lane as it becomes more dangerous at intersections and does not get the dirt and gravel sweeping effect from passing trucks that a normal shoulder path gets. Reminders to motorists of the presence of bicycles on the roadway are important however, and the addition of this type of sign is part of the signage system design for the Trail.

Interpretive Signs

The last category of signs to be added to the system for Jacob's Ladder Trail is that of interpretive signs. These signs are not directly on the roadside, rather they are placed in the turn-outs, trail head or visitors' centers. Approximately six of these would be sufficient to present aspects of the natural and human history of the region and the roadway and to orient tourists to various attractions. The most unobtrusive of these signs is a low-impact design, roughly waist high and tilted at an angle for easy reading by all ages. These signs should be weather and vandal proof and when dealing with historical issues, should use graphics from the historical

The photographs on this page are representative of the style of sign recommended for the Jacob's Ladder Trail Scenic Byway. The signs are extremely functional, yet because they are mounted on a wooden support framework, do not detract from the scenic and historic qualities of the highway.

material available about the Trail. Specifically it is recommended that reproductions of historic postcards which are in several private collections be used where appropriate in the sign displays.

The visitors' center(s) will not be open at all times, so signs should be provided at the center which would give location information and summary background information on the corridor. The National Park Service has established a number of guidelines for interpretive and informational signs, for their construction and colors, and should be consulted for the construction of these signs.

Summary of Signage System Design Recommendations

- The principle to be followed in the implementation of a sign system for the Scenic Byway is to add the fewest, most discrete signs possible to the roadside.
- Signs should be mounted so as not to be reflective from the reverse side.
- Signs should neither be profiled against the horizon nor against a river background.
- Signs should have modest plantings around them.
- A new wood support design is recommended for all the roadside sign mountings and for the interpretive signs at turn-outs and visitors' centers (Refer to photographs).
- No new regulatory or warning signs are recommended for the system, but existing signs should be re-mounted in the system's wooden support framework.
- No new guide signs are recommended for the Trail, however existing signs should be re-mounted in the system's wooden support framework.
- Tourist Oriented Directional Signs should be incorporated in the new design system at the smallest available scale. They should be placed on the system's wooden support framework. Specific Service Signs may be included to supplement the TOD signs to encourage economic development. The latter should be an alternative to TOD signs, rather than an addition.
- A limited number, no more than two per town, of recreational and cultural interest area signs should be incorporated in the system as appropriate. They should be in pictogram rather than written format and mounted on the wooden support framework.
- Trailblazers should not be installed as a separate sign category for the Scenic Byway. Rather, a logo of the Byway should represent it and be incorporated on guide and TOD signs.
- Historic District signs should be erected for districts which abut Jacob's Ladder Trail as they are listed on the National Register. These signs are bronze or aluminum and come with their own mounting system.
- Road-sharing bicyclist signs should be added to the Trail mounted on wooden system supports.
- Interpretive signs should be installed in turn-outs and trail heads being improved for the Byway to provide natural and human history for travelers.

MAP PRODUCTS

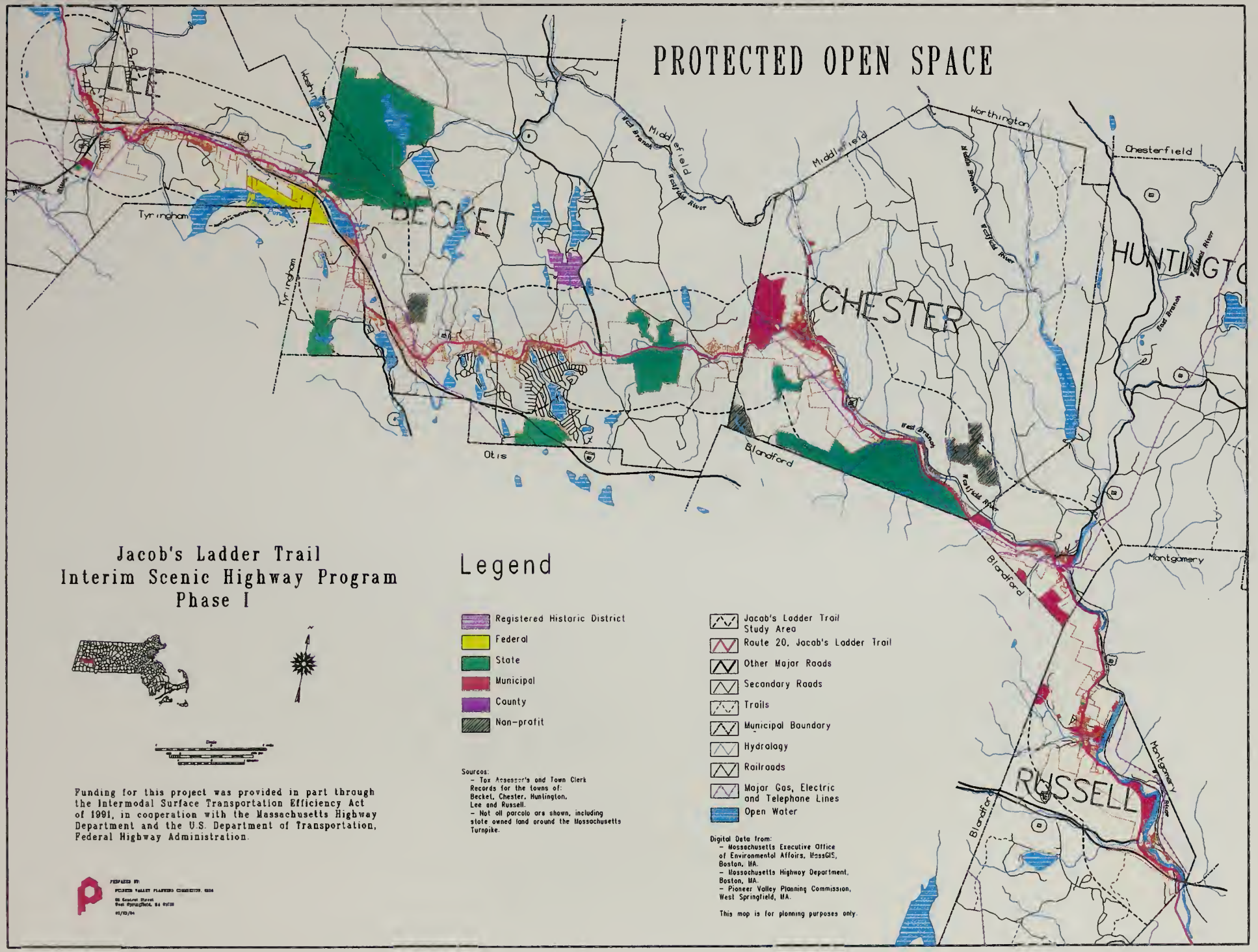
In order to gain a better understanding of the land use, scenic and environmental considerations within the Jacob's Ladder Trail Scenic Byway, a series of computerized maps were developed using a Geographic Information System (GIS). Various pieces of information were collected from local, state and federal sources and digitally entered into the PVPC's GIS. A total of six maps were developed and were produced in a color format. These maps were also reproduced in an 8 1/2 " by 11" format and are included in the following pages.

The Jacob's Ladder Trail Scenic Byway Program GIS maps include:

- Protected Open Space
- Town Zoning Districts
- Wetlands and 100 Year Flood Plain
- Proposed Corridor Overlay Zone
- 1985 Land Use
- Cultural, Recreational and Scenic Resources

The purpose of these maps is threefold. First, the maps serve as a visual instrument in viewing the Jacob's Ladder Trail from Russell to Lee. Second, the maps serve as a planning tool in the development of assumptions and recommendations pertaining to the workplan of this phase of the Jacob's Ladder Trail Scenic Byway Program. Third, the maps serve as a base for future management recommendations and actions pertaining to the Jacob's Ladder Trail Scenic Highway.

PROTECTED OPEN SPACE



Jacob's Ladder Trail
Interim Scenic Highway Program
Phase I

Funding for this project was provided in part through the Intermodal Surface Transportation Efficiency Act of 1991, in cooperation with the Massachusetts Highway Department and the U.S. Department of Transportation, Federal Highway Administration.

PREPARED BY:
PIONEER VALLEY PLANNING COMMISSION, 1994
01/10/94

Legend

- Registered Historic District
- Federal
- State
- Municipal
- County
- Non-profit

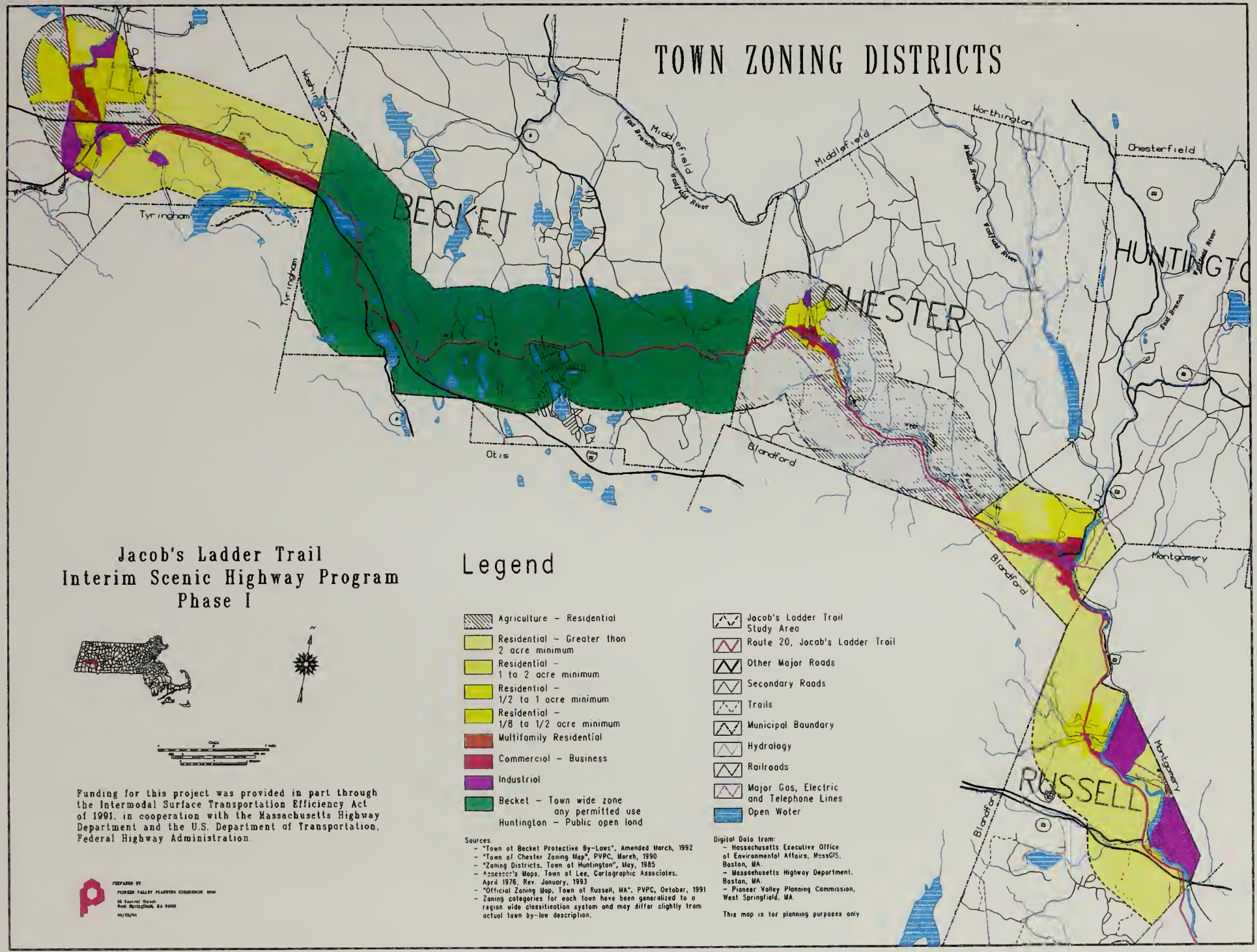
- Jacob's Ladder Trail Study Area
- Route 20, Jacob's Ladder Trail
- Other Major Roads
- Secondary Roads
- Trails
- Municipal Boundary
- Hydrology
- Railroads
- Major Gas, Electric and Telephone Lines
- Open Water

Sources:
- Tax Assessor's and Town Clerk Records for the towns of: Becket, Chester, Huntington, Lee and Russell.
- Not all parcels are shown, including state owned land around the Massachusetts Turnpike.

Digital Data from:
- Massachusetts Executive Office of Environmental Affairs, MassGIS, Boston, MA.
- Massachusetts Highway Department, Boston, MA.
- Pioneer Valley Planning Commission, West Springfield, MA.

This map is for planning purposes only.

TOWN ZONING DISTRICTS



Jacob's Ladder Trail
Interim Scenic Highway Program
Phase I

Funding for this project was provided in part through the Intermodal Surface Transportation Efficiency Act of 1991, in cooperation with the Massachusetts Highway Department and the U.S. Department of Transportation, Federal Highway Administration.

PREPARED BY
PIONEER VALLEY PLANNING COMMISSION, 1994
26 Central Street
West Springfield, MA 01089
09/93/94

Legend

- Agriculture - Residential
- Residential - Greater than 2 acre minimum
- Residential - 1 to 2 acre minimum
- Residential - 1/2 to 1 acre minimum
- Residential - 1/8 to 1/2 acre minimum
- Multifamily Residential
- Commercial - Business
- Industrial
- Becket - Town wide zone any permitted use
- Huntington - Public open land

- Jacob's Ladder Trail Study Area
- Route 20, Jacob's Ladder Trail
- Other Major Roads
- Secondary Roads
- Trails
- Municipal Boundary
- Hydrology
- Railroads
- Major Gas, Electric and Telephone Lines
- Open Water

Sources:
- "Town of Becket Protective By-Laws", Amended March, 1992
- "Town of Chester Zoning Map", PVPC, March, 1990
- "Zoning Districts, Town of Huntington", May, 1985
- Assessor's Maps, Town of Lee, Cartographic Associates, April 1976, Rev. January, 1993
- "Official Zoning Map, Town of Russell, MA", PVPC, October, 1991
- Zoning categories for each town have been generalized to a region wide classification system and may differ slightly from actual town by-law description.

Digital Data from:
- Massachusetts Executive Office of Environmental Affairs, MassGIS, Boston, MA.
- Massachusetts Highway Department, Boston, MA.
- Pioneer Valley Planning Commission, West Springfield, MA.

This map is for planning purposes only.

Wetlands and 100 Year Flood Plain

Jacob's Ladder Trail
Interim Scenic Highway Program
Phase I

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PREPARED BY:
PIONEER VALLEY PLANNING COMMISSION, 1994
60 Congress Street
West Springfield, MA 01089
06/30/94

Legend

- 100 Year Flood Plain
- Wetlands

Sources:

- Flood Insurance Rate Maps; National Flood Insurance Program, Federal Emergency Management Agency, Washington, D.C
  - Becket, August 5, 1991
  - Chester, October 16, 1988
  - Huntington, June 15, 1988
  - Lee, June 1, 1982
  - Russell, December 15, 1990
- National Wetlands Inventory, U.S. Fish and Wild Service, U.S. Department of the Interior, Washington, D.C.
  - Blandford, East Lee, Otis, Westhampton, and Waronoco - 10/75
  - Becket and Chester - 10/76

- Jacob's Ladder Trail Study Area
- Route 20, Jacob's Ladder Trail
- Other Major Roads
- Secondary Roads
- Trails
- Municipal Boundary
- Hydrology
- Railroads
- Major Gas, Electric and Telephone Lines
- Open Water

Digital Data from:
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- Massachusetts Highway Department, Boston, MA.
- Pioneer Valley Planning Commission, West Springfield, MA.

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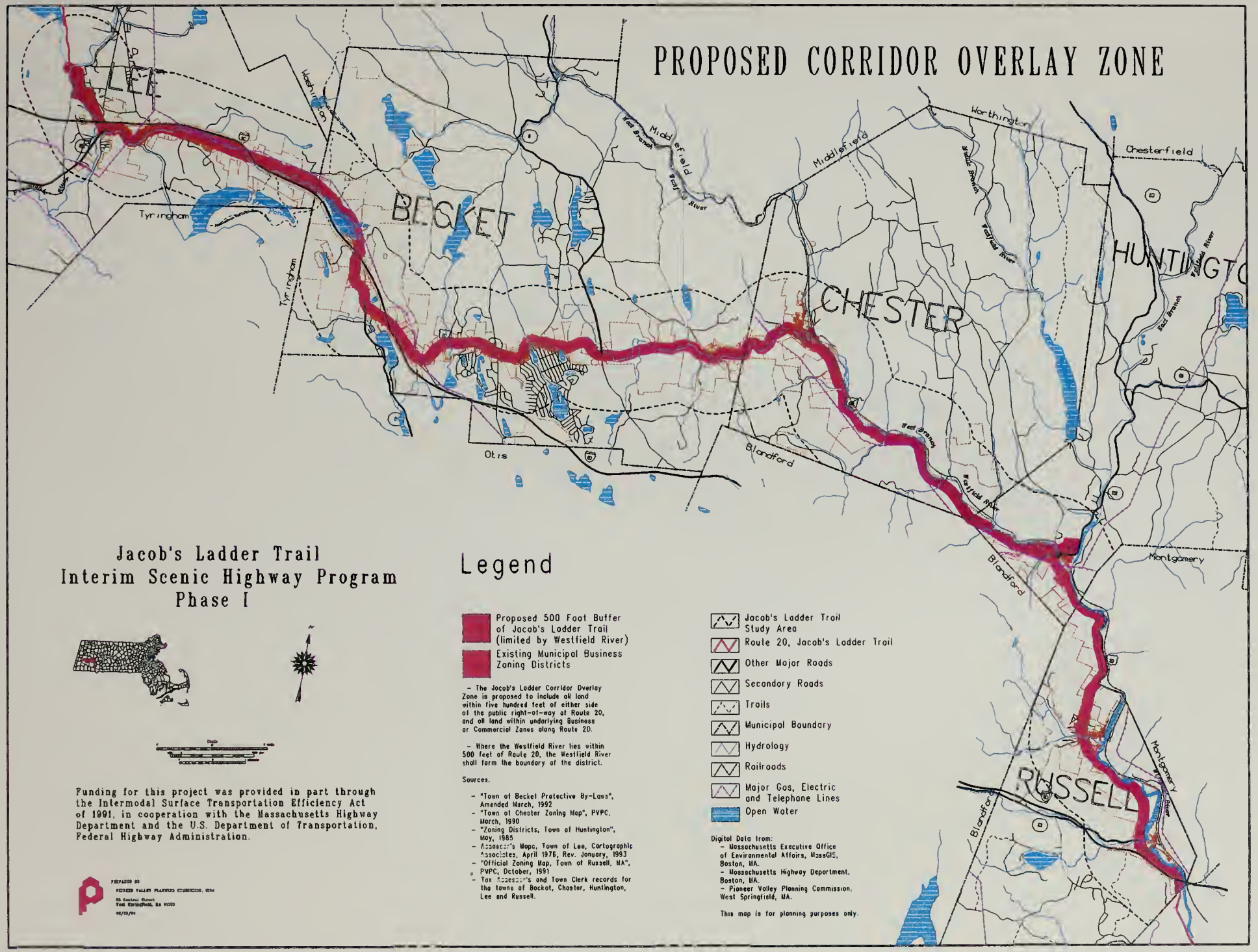
PROPOSED CORRIDOR OVERLAY ZONE



Jacob's Ladder Trail
Interim Scenic Highway Program
Phase I

Funding for this project was provided in part through the Intermodal Surface Transportation Efficiency Act of 1991, in cooperation with the Massachusetts Highway Department and the U.S. Department of Transportation, Federal Highway Administration.

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PIONEER VALLEY PLANNING COMMISSION, 1994
26 Central Street
West Springfield, MA 01089
06/23/94

Legend

- Proposed 500 Foot Buffer of Jacob's Ladder Trail (limited by Westfield River)
- Existing Municipal Business Zoning Districts

- The Jacob's Ladder Corridor Overlay Zone is proposed to include all land within five hundred feet of either side of the public right-of-way of Route 20, and all land within underlying Business or Commercial Zones along Route 20.
- Where the Westfield River lies within 500 feet of Route 20, the Westfield River shall form the boundary of the district.

Sources.

- "Town of Becket Protective By-Laws", Amended March, 1992
- "Town of Chester Zoning Map", PVPC, March, 1990
- "Zoning Districts, Town of Huntington", May, 1985
- Assessor's Maps, Town of Lee, Cartographic Associates, April 1976, Rev. January, 1993
- "Official Zoning Map, Town of Russell, MA", PVPC, October, 1991
- Tax Assessor's and Town Clerk records for the towns of Becket, Chester, Huntington, Lee and Russell.

- Jacob's Ladder Trail Study Area
- Route 20, Jacob's Ladder Trail
- Other Major Roads
- Secondary Roads
- Trails
- Municipal Boundary
- Hydrology
- Railroads
- Major Gas, Electric and Telephone Lines
- Open Water

Digital Data from:

- Massachusetts Executive Office of Environmental Affairs, MassGIS, Boston, MA.
- Massachusetts Highway Department, Boston, MA.
- Pioneer Valley Planning Commission, West Springfield, MA.

This map is for planning purposes only.

1985 LAND USE

Jacob's Ladder Trail
Interim Scenic Highway Program
Phase I

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PREPARED BY:
PIONEER VALLEY PLANNING COMMISSION, 1994
60 Congress Street
West Springfield, MA 01089
01/03/94

Legend

- Forest
- Agriculture
- Single family residential
- Multifamily
- Commercial
- Industrial, waste, transportation, mining
- Wetlands
- Open water
- Open land, recreation, and power lines.

Source:
- 1985 MacConnell Land Use, Resource Mapping, University of Massachusetts, Amherst, MA., maintained by EOEA, MassGIS, Boston, MA., March, 1990.

- Jacob's Ladder Trail Study Area
- Route 20, Jacob's Ladder Trail
- Other Major Roads
- Secondary Roads
- Trails
- Municipal Boundary
- Hydrology
- Railroads
- Major Gas, Electric and Telephone Lines
- Open Water

Digital Data from:
- Massachusetts Executive Office of Environmental Affairs, MassGIS, Boston, MA.
- Massachusetts Highway Department, Boston, MA.
- Pioneer Valley Planning Commission, West Springfield, MA.

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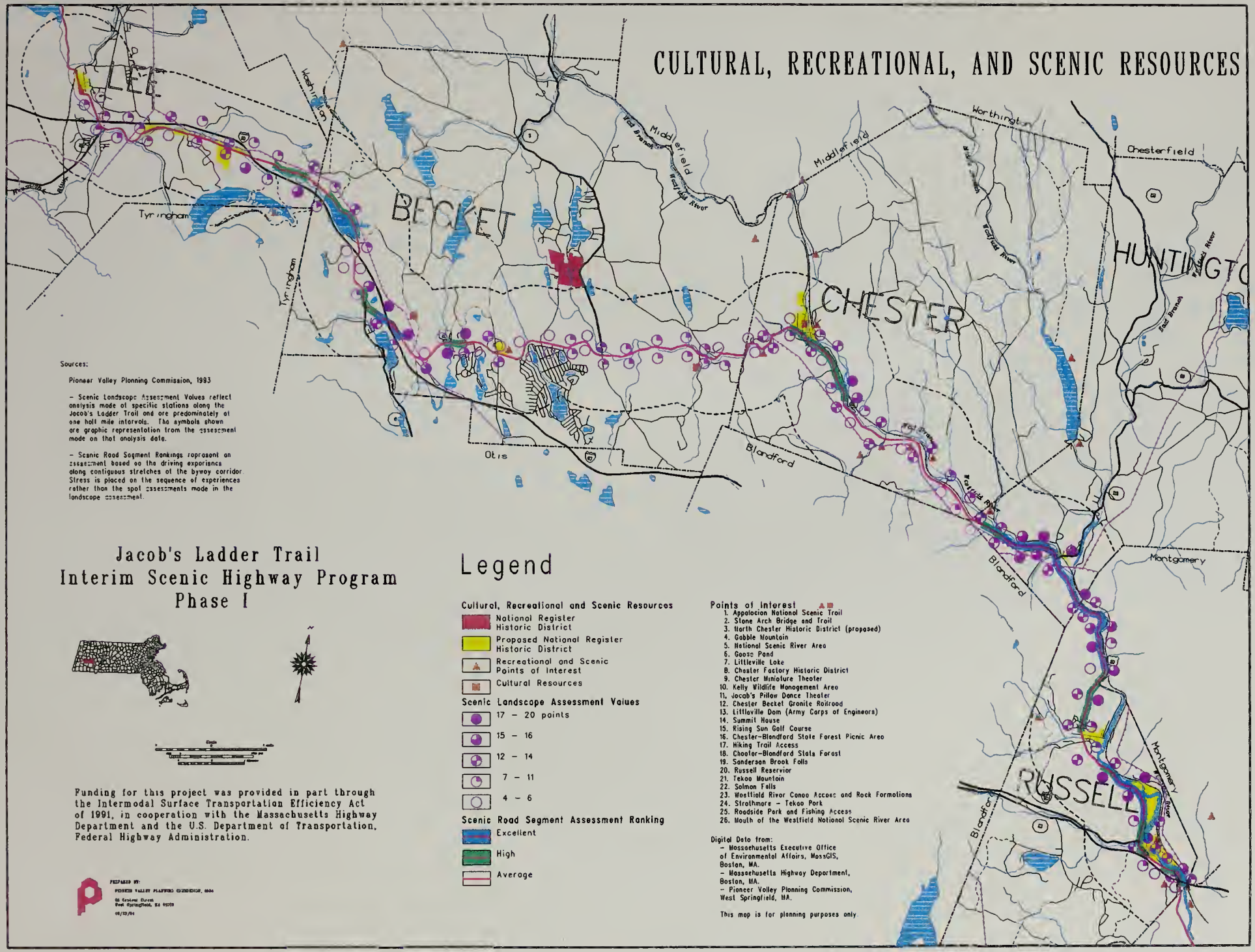
CULTURAL, RECREATIONAL, AND SCENIC RESOURCES



Sources:

Pioneer Valley Planning Commission, 1993

- Scenic Landscape Assessment Values reflect analysis made at specific stations along the Jacob's Ladder Trail and are predominately at one half mile intervals. The symbols shown are graphic representation from the assessment made on that analysis date.

- Scenic Road Segment Rankings represent an assessment based on the driving experience along contiguous stretches of the byway corridor. Stress is placed on the sequence of experiences rather than the spot assessments made in the landscape assessment.

Jacob's Ladder Trail
Interim Scenic Highway Program
Phase I

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PREPARED BY:
PIONEER VALLEY PLANNING COMMISSION, 1994
60 Congress Street
West Springfield, MA 01089
08/23/94

Legend

Cultural, Recreational and Scenic Resources

- National Register Historic District
- Proposed National Register Historic District
- Recreational and Scenic Points of Interest
- Cultural Resources

Scenic Landscape Assessment Values

- 17 – 20 points
- 15 – 16
- 12 – 14
- 7 – 11
- 4 – 6

Scenic Road Segment Assessment Ranking

- Excellent
- High
- Average

Points of Interest

1. Appalacian National Scenic Trail
2. Stone Arch Bridge and Trail
3. North Chester Historic District (proposed)
4. Gobble Mountain
5. National Scenic River Area
6. Goose Pond
7. Littleville Lake
8. Chester Factory Historic District
9. Chester Miniature Theater
10. Kelly Wildlife Management Area
11. Jacob's Pillow Dance Theater
12. Chester Becket Granite Railroad
13. Littleville Dam (Army Corps of Engineers)
14. Summit House
15. Rising Sun Golf Course
16. Chester–Blandford State Forest Picnic Area
17. Hiking Trail Access
18. Chester–Blandford State Forest
19. Sanderson Brook Falls
20. Russell Reservior
21. Tekoa Mountain
22. Salmon Falls
23. Westfield River Canoe Access and Rock Formations
24. Strathmore – Tekoa Park
25. Roadside Park and Fishing Access
26. Mouth of the Westfield National Scenic River Area

Digital Data from:
- Massachusetts Executive Office of Environmental Affairs, MassGIS, Boston, MA.
- Massachusetts Highway Department, Boston, MA.
- Pioneer Valley Planning Commission, West Springfield, MA.

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